

A NEW SPECIES OF *BIOBLAPSIS* (ICHNEUMONIDAE: DIPLAZONTINAE)
FROM NORTH AMERICA

Michael G. Fitton

Department of Entomology, British Museum (Natural History)
Cromwell Road, London SW7 5BD, England

The genus *Bioblapsis* has been known only from a single, distinctive European species. The discovery of a second species in North America necessitates a reappraisal and redefinition of the genus.

Genus **BIOBLAPSIS** Foerster

This new diagnosis is modified from that of Townes (1971: 229), which also was not entirely accurate with regard to the then known species (Fitton and Rotheray, 1982: 316). Townes (1971: 230, 358) gives a full generic synonymy and a habitus figure.

Fore wing 3.9 to 6.6 mm long. Face 2.1 to 2.6 as wide as high, polished or coriaceous, medially protuberant, the median protuberance not delimited by grooves. Subocular sulcus present or absent. Clypeus 2.1 to 2.3 as wide as high, separated from the face by a groove, polished or sub-polished, almost flat in profile, slightly concave apico-laterally, with the edge thin and slightly reflexed, its apical margin with a weak median notch. Antenna 0.63 to 0.92 as long as fore wing. Flagellum with 17 to 19 segments; second segment 1.7 to 3.1 as long as broad; placoid sensillae small and numerous; and with erect bristles distinct from the clothing hairs. Male flagellum without tyloids. Thorax polished, with scattered punctures. Notaulus indicated by a faint impression. Epicnemial carina complete but sometimes obsolete ventrally. Sternaulus absent. Prescutellar groove with longitudinal carinae, including about six strong ones. Propodeum with strong carinae, its spiracle enlarged and with an elevated rim. Petiolar face of propodeum steeply sloping. Fore wing with 3r-m absent and cu-a slightly distal to M & Rs. Hind wing with cu-a, shorter than abscissa of Cul between M + Cul and cu-a, and 1 to 3 costal hamuli. Tibiae with numerous strong hairs. Gaster more or less compressed from segment 3 to apex in female, subcylindrical in male, polished. Posterior edges of tergites 3 to 8 (F) or 3 to 7 (M) extending further backwards laterally than medially, especially in female. First tergite 1.18 to 1.60 as long as wide, with dorsolateral and ventrolateral carinae strong and latero-median carinae well developed to virtually absent. Spiracle of first tergite enlarged, but slightly smaller than that of propodeum. Second tergite 0.60 to 1.10 as long as wide, with a fold separating the laterotergite, and with the spiracle on the main part of the tergite. Third tergite with a fold separating the laterotergite only at its extreme anterior.

1. *Bioblapsis henryi*, n. sp. (Fig. 1)

Female: Fore wing length 3.9 mm. Face 2.1 as wide as high, coriaceous with scattered punctures which are not easily distinguished from the general sculpture. Median protuberance of face slightly less strong than in *B. polita*. Subocular sulcus absent. Clypeus 2.3 as wide as high, sub-polished and more weakly sculptured than face. Antenna 0.92 as long as fore wing. Flagellum with 18 segments (the final one partially subdivided); second segment 3.1 as long as broad; relative lengths of first, second and third segments 1:0.72:0.66;

the erect bristles relatively less numerous and conspicuous than in *B. polita* F. Notaulus indicated by an extremely weak impression. Epicnemial carina complete. The longitudinal carinae in the prescutellar groove less strong than in *B. polita*. Propodeal spiracle enlarged, but slightly less so than in *B. polita*. Fore wing with 2r-m subequal in length to the abscissa of M between 2r-m and m-cu. Hind wing with 2 or 3 costal hamuli (the holotype has 2 on the left and 3 on the right). Gaster relatively short, moderately compressed from segment 3 to apex; polished, from tergite 3 with fine, regular alutaceous sculpture, with relatively few fine, short hairs. Posterior edges of tergites 3 to 8 extending further backwards laterally than medially. Tergite 1 1.18 as long as wide, with the lateromedian carinae virtually absent. Tergite 1 and the base of tergite 2 granulate. Tergite 2 0.60 as long as wide. Apex of ovipositor sheath acute.

Blackish. Antennal flagellum brown. Whitish: spot on center of face, clypeus, mandibles except teeth, palpi, tegula and mesepimeron dorsally. Gaster with tergite 1 postero-medially and the posterior half of tergite 2 reddish. Remainder of gaster dark brown, not as black as head and thorax. Legs reddish. Extreme base and apical third of hind tibia and most of hind tarsus infusate. Fore coxa and fore, mid and hind trochanters and trochantelli whitish.

Male: Unknown.

Holotype: Female, USA: Michigan, Ann Arbor, 17. ix - 2. x. 1975, M. G. Fitton [British Museum (Natural History)].

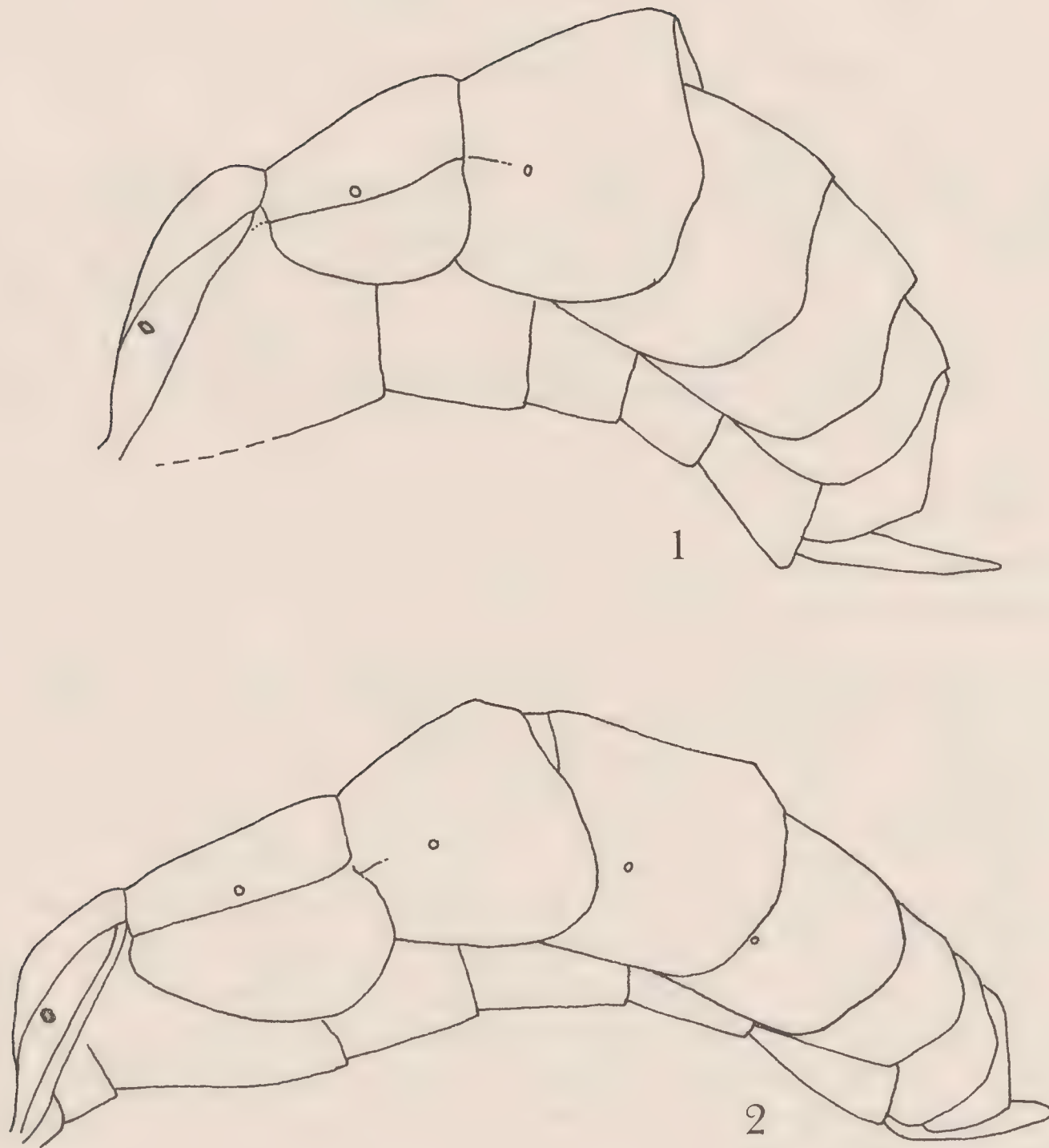
The description of a new species from a single specimen needs some justification. In this case the most important reasons are as follows. The genus includes only one other species, which has a relatively limited distribution and a distinctive morphology. The new species is from a different zoogeographical region and superficially it does not closely resemble the other species. No material of the new species was found in collections in the course of a study leading to a monographic revision of the subfamily Diplazontinae in North America (Dasch 1964). The holotype was collected in a Malaise trap in the immediate vicinity of the American Entomological Institute at Ann Arbor and despite intensive collecting in this area over many years by Henry and Marjorie Townes no other specimens have turned up. There is, therefore, a need to alert others to the existence of the species if further specimens, including males, are to be found.

To facilitate comparison a description of the European species, *B. polita*, is given below. A synonymy is also included because this species is still sometimes referred to by the invalid name *flavipes* (for example, by Thirion 1981: 90).

2. *Bioblapsis polita* (Vollenhoven) (Fig. 2)

Bassus flavipes Holmgren, 1858 (1856). K. Svenska. Vetensk. Akad. Handl. (N.F.) 1: 356. Type(s) M, Sweden: Smaland, Anneberg (? Stockholm) [not examined]. Name preoccupied in *Bassus* by Lucas, 1849.

Trichomastix polita Vollenhoven, 1878. Tijdschr. Ent. 21: 161. Holotype F, Netherlands: Scheveningen (? lost) [not examined].



Figs. 1-2. Gaster of female, left lateral view: 1, *Bioblapsis henryi*. 2, *B. polita* (not to the same scale).

Bassus tibialis Bridgman, 1883. Trans. Ent. Soc. Lond. 1883: 170. Syntype F, Great Britain (Norwich) [examined].

Trichomastix pallipes (Holmgren): Thomson, 1890. Opusc. Ent. 14: 1473. Incorrect subsequent spelling of *flavipes* Holmgren.

Female: Fore wing length 5.3 to 6.6 mm. Face 2.3 to 2.6 as wide as high, polished with scattered punctures and sometimes with very faint traces of sculpture. Subocular sulcus present and relatively strong. Clypeus 2.1 to 2.3 as wide as high, polished. Antenna 0.63 to 0.66 as long as fore wing. Flagellum with 17 to 18 segments; second segment 1.7 to 1.9 as long as broad; relative lengths of first, second and third segments about 1:0.62:0.55; the erect bristles long and conspicuous. Notaulus indicated by a faint impression. Epicnemial carina complete but sometimes obsolete ventrally. Propodeal spiracle considerably enlarged, with its elevated rim pale. Fore wing with 2r-m very short, less than half length of abscissa of M between 2r-m and m-cu. Hind wing with 2 (or sometimes 1) costal hamuli. Gaster relatively long, strongly compressed from segment 3 to apex; polished, from tergite 3 with extremely fine, regular alutaceous sculpture, especially laterally, with relatively few fine, short hairs. Posterior edges of tergites 3 to 8 extending much further backwards laterally than medially. Tergite 1 1.35 to 1.60 as long as wide, with the lateromedian carinae weak. Tergite 1 and the base of tergite 2 longitudinally striate. Tergite 2 0.96 to 1.10 as long as wide. Apex of ovipositor sheath rounded.

Blackish. Whitish: clypeus (especially medially), base of mandibles, palpi, humeral bar, tegula, scutellum laterally and mesepimeron dorsally. Legs reddish, hind tibiae and tarsus slightly infusate and with bases of all tibiae and hind basitarsus whitish.

Male: As female except: Fore wing length 6.0 to 6.2 mm. Face 2.2 as wide as high. Clypeus 2.3 as wide as high. Antenna 0.85 as long as fore wing. Flagellum with 19 segments; without tyloids; second segment 2.8 as long as broad; relative lengths of first, second and third segments about 1 : 0.72 : 0.64; the erect bristles shorter and less conspicuous than in female. Propodeal spiracle slightly less enlarged than in female. Gaster relatively long, subcylindrical in form from segment 3, tapering slightly to apex; polished, finely and fairly evenly punctate with longer and more abundant fine hairs than female. Posterior edges of tergites 3 to 7 extending only slightly further backwards laterally than medially. Tergite 1 1.47 to 1.50 as long as wide, with the lateromedian carinae stronger than in female. Tergite 1 rugulostriate and the base of tergite 2 striate. Tergite 2 1.00 as long as wide.

Blackish. Whitish: spot on center of face, facial orbits, clypeus, mandibles except teeth, palpi, humeral bar, tegula, subalar prominence, scutellum laterally and mesepimeron. Legs reddish, fore coxa and trochanter and hind tibia and tarsus paler and with bases of all tibiae and hind basitarsus whitish.

Material examined: 8 F, 2 M, all from the British Isles. Dates of capture range from mid-June to October.

DISCUSSION

B. henryi can be distinguished easily from *B. polita* by its overall superficial appearance and there is little point in giving a key to separate them. Apart from a few characters, such as the presence or absence of a subocular sulcus, the differences between the species are in the degree of development of characters. Many of these characters, such as the enlargement of the propodeal spiracle, have been used, particularly in keys, to distinguish the genus and they are less well developed in the new species. *B. henryi* will not run to *Bioblapsis* in Townes key to genera (1971) nor in my own (Fitton and Rotheray 1982). No simple modification of either of these keys would enable it to be included. Study of *B. henryi* has reinforced my opinion that the present generic classification of the Diplazontinae is unsatisfactory. Recent work has led to more satisfactory groupings of species within genera but the relationships between these species groups and the level at which genera should be recognized are in need of much further study. It would be premature to make any more comments here.

REFERENCES

- Dasch, C. E. 1964. Ichneumon-flies of America North of Mexico: 5. Subfamily Diplazontinae. Mem. Amer. Ent. Inst. 3.
- Fitton, M. G. and Rotheray, G. E. 1982. A key to the European genera of diplazontine ichneumon-flies, with notes on the British fauna. Syst. Ent. 7: 311-320.
- Thirion, C. 1981. Ichneumonidae (Hymenoptera) nouveaux pour la faune Belge. Ann. Soc. Roy. Zool. Belg. 112: 89-92.
- Townes, H. 1971. The genera of the Ichneumonidae, part 4. Mem. Amer. Ent. Inst. 17.